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EXAMINER

MEINECKE DIAZ, SUSANNA M

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,323

Applicant(s)

FAY ET AL.

Examiner

Susanna M. Diaz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24,26-37 and 40-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24,26-37 and 40-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This non-final Office action is responsive to Applicant's appeal brief filed October 24, 2005.

Claims 1-24, 26-37, and 40-63 are presented for examination.

Response to Arguments

2. Applicant's arguments, see the Appeal Brief, filed October 24, 2005, with respect to the rejections of claims 1-24, 26-37, and 40-63 under 35 U.S.C. §§ 102(a) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the references presented below.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-24, 26-31, and 60-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1 (and dependent claims 2-4, 26-31, and 60-63), if the inputted project information is modified to incorporate the selected enhancement solutions, it is implied that the desired performance level is modified as well since the inputted project information included a desired performance level. However, modification of the desired

performance level could cause an endless loop of selecting enhancement solutions based on project information and modifying the inputted project information. Does Applicant intend to recite "inputting project information and a desired performance level" instead?

Claim 27 is recited as being dependent from claims "25 1." Please amend claim 27 to clarify whether claim 27 is dependent from claim 1 or claim 25. For examination purposes, since claim 25 is cancelled, it will be assumed that claim 27 is dependent from claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-24, 26-37, and 40-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over AZONIC Acoustical Analysis Service (AAAS) (as disclosed in "AZONIC's Acoustical Analysis Service Determines Optimum Noise and Reverberation Reduction Before Purchase," herein referred to as "Azonic") in view of "Sound Control for Commercial and Residential Buildings" (herein referred to as "Sound Control").

Azonic discloses a computer-implemented method for enhancing performance of a project, comprising the steps of:

[Claim 1] inputting project information, including a desired performance level (Information is collected from the customer regarding the room's characteristics. This information is analyzed by the three-dimensional, computerized modeling program to "customize the acoustical environment to the desired sound level and/or reverberation time");

selecting, by a computer, enhancement solutions based on the project information (The computerized modeling program performs analysis that "provides comprehensive information on acoustics detailed graphs and *recommendations* necessary to optimize sound reduction levels");

[Claim 2] wherein the project information comprises building plans for a structure (Rooms, such as an auditorium, concert hall, studio, etc., are the subject of the acoustical assessment);

[Claim 3] wherein the project information comprises information on the uses of rooms within the structure (Space usage is taken into account);

[Claim 4] wherein the project information comprises information on interior structural elements (The room's construction details, including physical dimensions and construction materials are collected);

[Claim 6] wherein the enhancement solutions are selected from a plurality of enhancement solutions stored in a sound control center (The completed analysis provides recommendations necessary to optimize sound reduction levels. In order for a computerized modeling program to be able to generate recommendations, it must have some stored association between analysis results and recommendations. A sound

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control center can refer to the system running the computerized modeling software and/or its location thereof).

Regarding claims 1, 26, and 27, Azonic does not expressly teach the step of modifying the inputted project information to incorporate the selected enhancement solutions, wherein the modified inputted information describes a project operating at the desired performance level, and the modified project information is presented to a user; however, Sound Control provides actual examples of how Azonic's type of acoustical analysis is implemented (see picture on title page, page 2, etc.). Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize Azonic to actually modify the inputted project information to incorporate the selected enhancement solutions that meet the desired performance level and then present the modified project information to a user in order to facilitate actual implementation of the acoustic modeling results, thereby making Azonic's modeling program useful.

Azonic is a computerized acoustical reduction modeling program that customizes an acoustical environment to a desired sound level. Azonic does not explicitly disclose details regarding the specific acoustical factors that are taken into account as part of the modeling process; however, Sound Control discusses many of the variables that are commonly considered when planning sound control for commercial and residential buildings. Since Sound Control outlines much of the theoretical and practical knowledge based on industry standards (e.g., see page 1, "The North American

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Insulation Manufacturers Association (NAIMA) developed these recommendations based on the result of numerous acoustical tests using American Society for Testing and Materials (ASTM) methods”) and needed for many acoustical reduction projects, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant’s invention to modify Azonic to incorporate the theory and practice discussed by Sound Control in order to facilitate more accurate modeling results that are useful in real-world applications and conform to industry standards.

Regarding claims 5, 7-9, 11, 60, and 63, Azonic does not teach the recited details, yet Sound Control teaches that [Claim 5] project information comprises information on areas within a structure, wherein the desired performance level is a performance of noise reduction between the areas (page 2, Improving Office to Office Sound Reduction), [Claim 7] wherein the possible enhancement solutions are each combinable with another enhancement solution to form a combination of enhancement solutions (pages 8-19), [Claim 8] wherein a system performance rating is associated with each combination of enhancement solutions, and wherein each system performance rating is stored in the sound control center (pages 8-14, An STC is defined for each combination of gypsum board thickness and insulation specifications), [Claim 9] system performance rating may be assessed in terms of a field sound transmission class rating (page 1, Sound Transmission Class (STC) and Sound Control; page 2, Factors That Degrade Performance), [Claim 11] wherein a cost associated with each combination of enhancement solutions and wherein the combination of enhancement solutions is also chosen based on cost (page 1, Methods of Sound Control alludes to

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the fact that an enhancement solution may be selected based on cost; footnotes on pages 5 and 6, the client's budget is a factor in decision-making), [Claim 60] wherein each system performance rating is verified by experimentation (page 1, "The North American Insulation Manufacturers Association (NAIMA) developed these recommendations based on the result of numerous acoustical tests using American Society for Testing and Materials (ASTM) methods," Ratings Based On Lab Tests), [Claim 63] wherein the desired performance level is a field system sound transmission rating (page 1, Sound Transmission Class (STC) and Sound Control; page 2, Factors That Degrade Performance). The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Azonic to incorporate the details of claims 5, 7-9, 11, 60, and 63 (as taught by Sound Control) in order to facilitate more accurate modeling results that are useful in real-world applications and conform to industry standards (as discussed above).

Furthermore, Azonic teaches that recommendations are made to achieve a desired sound level and Sound Control recommends a combination of enhancement solutions with a corresponding sound transmission class; therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Azonic such that the step of selecting further comprises the step of choosing a combination of enhancement solutions with a system performance rating equal to or greater than the desired performed level (claim 10) in order to facilitate more accurate modeling results that are useful in real-world applications and conform to industry standards (as discussed above). As per claim 61,

Sound Control implies that cost is a factor when selecting suitable sound control options, yet neither Azonic nor Sound Control expressly teaches that the cost includes information related to materials costs and labor cost. However, Official Notice is taken that it is old and well-known in the art of construction management to take into account material costs and labor cost when making accounting decisions. Taking into account both material costs and labor cost yields a more accurate estimate of costs associated with a particular construction project. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Azonic-Sound Control combination to incorporate an analysis of cost such that each cost includes information related to materials cost and labor cost (claim 61) in order to yield a more accurate estimate of costs associated with a particular acoustical project.

Regarding claims 12-23 and 62, Azonic does not teach the recited details, yet Sound Control teaches that [Claim 12] the step of selecting further comprises the step of reviewing the project information to determine improvement areas (pages 15-19), [Claim 13] wherein the enhancement solutions are selected based upon the determined improvement areas (pages 15-19), [Claim 14] wherein the determined improvement areas include acoustical weak links (pages 15-19), [Claim 15] wherein the weak links include penetrating items, construction discontinuities, sound transmission through structural components, and cross-talk through ducts (page 1, Methods of Sound Control; pages 15-19), [Claim 16] wherein at least one of the enhancement solutions involves the addition of a sound control component (pages 15-19), [Claim 17] wherein

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the sound control component is a sound control material installed in a wall, floor, or ceiling assembly (pages 15-19), [Claim 18] wherein the sound control component is a material for sealing wall, floor, and ceiling perimeters (pages 15-19), [Claim 19] wherein the sound control component is an acoustically enhanced door (page 15), [Claim 20] where at least one of the enhancement solutions involves the indirect positioning of interior components (pages 15-19), [Claim 21] wherein the interior components comprise electrical outlets, air ducts, and fluid-filled pipes (pages 15-19), [Claim 22] wherein at least one of the enhancement solutions involves the discontinuous construction of structural elements of the project (pages 1, 15-19), [Claim 23] wherein the at least one enhancement solution comprises the staggering of wall studs (page 3, Metal Framing vs. Wood Framing), and [Claim 62] wherein the weak links include components having component performance ratings less than the desired performance level (pages 4-6). The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Azonic to incorporate the details of claims 12-23 and 62 (as taught by Sound Control) in order to facilitate more accurate modeling results that are useful in real-world applications and conform to industry standards (as discussed above).

As per claim 24, neither Azonic nor Sound Control expressly teaches that the at least one enhancement solution comprises the addition of a cut line in a floor or floor elements; however, Official Notice is taken that it is old and well-known in the art of sound control to add a cut line in a floor or floor elements in order to mitigate noise pollution. Therefore, the Examiner submits that it would have been obvious to one of

ordinary skill in the art at the time of Applicant's invention to modify the Azonic-Sound Control combination to include the addition of a cut line in a floor or floor elements as one of its available solutions in order to provide more comprehensive analysis and solutions to its customers, thereby making the Azonic-Sound Control combination more appealing to its customers.

In reference to claim 28, Azonic uses a computerized-modeling system as well as "advanced and highly sophisticated instrumentation" to conduct its acoustical testing and collect corresponding results, yet it does not expressly disclose that the modified project information (e.g., acoustically-related recommendations) is transferred from the sound control center (i.e., the laboratory) to a remote computer. However, Official Notice is taken that it is old and well-known in the art of testing and networking to provide testing results remotely to another user. This allows remotely located people to quickly, inexpensively, and conveniently collaborate on a project. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt Azonic's modified project information (e.g., acoustically-related recommendations) to be transferred from the sound control center to a remote computer (claim 28) in order to facilitate that Azonic and its remotely located customers can quickly, inexpensively, and conveniently collaborate on a noise reduction project.

As per claims 29 and 30, the Azonic-Sound Control combination suggests building materials and specifications for improving acoustical conditions, yet neither Azonic nor Sound Control expressly teaches the provision of a bill of materials *per se*,

including related cost information. However, Official Notice is taken that it is old and well-known in the art of construction to convert an assessment of what materials are required and how much they cost into a formal bill of materials in order to place an order for the needed materials from a third party supplier. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention for the Azonic-Sound Control combination to adapt its modified project information to include a bill of materials that includes cost information in order to facilitate the placement of an order for the needed materials from a third party supplier.

Furthermore, as per claims 31 and 59, neither Azonic nor Sound Control explicitly provides a list of tasks based on the selected enhancement solutions, such as component installation instructions; however, Official Notice is taken that it is old and well-known in the art of project management to plan a list of tasks associated with accomplishing building recommendations and plan a budget accordingly based on both materials and labor costs. Task assignment facilitates efficient planning of a project so that the project is more likely to be completed in a timely fashion. Budget planning based on both materials and labor costs helps to ensure that the project is economically feasible. Since the customers of the Azonic-Sound Control combination implement its recommendations, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Azonic-Sound Control combination to include a list of tasks based on the selected enhancement solutions (claim 31), such as component installation instructions (claim 59) in order to

facilitate efficient planning of a project so that the project is more likely to be completed in a timely and economically feasible fashion.

[Claims 32-37, 40-59] Claims 32-37 and 40-59 recite limitations already addressed by the rejection of claims 1-24, 26-31 and 60-63 above; therefore, the same rejection applies. (Please note that the rejection of claim 59 is addressed in more detail with the rejection of claim 31 above.)

Regarding claims 32, 40, and 58, Azonic uses a computerized-modeling system as well as “advanced and highly sophisticated instrumentation” to conduct its acoustical testing and collect corresponding results, yet it does not expressly disclose the use of a central computer *per se* for receiving project information through a network from a user computer and returning modified project information to the user at his/her computer.

Official Notice is taken that it is old and well-known in the art to utilize a central computer for gathering testing information and distributing analysis results in order to facilitate a central contact location for processing analysis requests from globally located customers (via the customers’ computers). This arrangement facilitate quick, efficient, and economic communications with remotely located customers while attracting a larger customer base since communications may be conducted globally. Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of Applicant’s invention to run Azonic’s computerized modeling program at a central computer for receiving project information (claim 32) through a network from a user computer (claim 40) and returning modified project information to

the user at his/her computer (claim 58) in order to facilitate quick, efficient, and economic communications with remotely located customers while attracting a larger customer base since communications may be conducted globally.

As per claims 34-37, Azonic states that the customer-provided data is entered using a questionnaire and returned to Azonic, thereby implying that the computerized modeling program is run at an Azonic, Inc. location. The Azonic-Sound Control combination does not expressly teach that the central computer is located in a design department, such as the control center or main facility, or that the reviewer is located in the control center. First, it should also be noted that the location of the central computer or reviewer has no effect on the recited structure or functionality and therefore does not patentably distinguish the claimed invention over the prior art. Second, the Examiner submits that a design department, such as a control center or main facility, is a well-known type of company division. A company can choose to place their design department wherever they see fit, e.g., based on cost considerations and/or convenience. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Azonic-Sound Control combination such that the central computer is located in a design department, such as a control center or main facility, or that the reviewer is located in the control center (claims 34-37) in order to allow Azonic employees to conveniently access the design department and reviewer, as needed.

Regarding claims 41, 43, and 49-53, Azonic does not teach the recited details, yet Sound Control teaches that [Claim 41] the project information comprises building

plans for a residential structure (title, Sound Control for Commercial and Residential Buildings; page 4, Residential Construction), [Claim 43] the project information comprises information on the uses of rooms with the residential structure (page 6, Living rooms, Bedrooms), [Claim 49] wherein at least one of the plurality of enhancement solutions comprises material information (pages 8-19), [Claim 50] wherein material information comprises information on a sound absorbing material (pages 8-19), [Claim 51] wherein material information comprises information on a sound blocking material (pages 8-19), [Claim 52] wherein at least one of the plurality of enhancement options comprises structural relocation information (page 16, The "Do's" and "Don'ts" show examples of relative structural relocation. In other words, they advise someone to structurally arrange elements in one way versus another), [Claim 53] wherein structural relocation information contains information on indirectly positioning interior components (page 16, The "Do's" and "Don'ts" show examples of relative structural relocation. In other words, they advise someone to structurally arrange elements in one way versus another). The Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify Azonic to incorporate the details of claims 41, 43, and 49-53 (as taught by Sound Control) in order to facilitate more accurate modeling results that are useful in real-world applications and conform to industry standards (as discussed above).

As per claim 46, Azonic states that the customer-provided data is entered using a questionnaire and returned to Azonic, thereby implying that the computerized modeling program is run at an Azonic, Inc. location. Sound Control discloses that an acoustical

laboratory determines system performance ratings (discussed above). The Azonic-Sound Control combination does not expressly teach that the acoustical laboratory is located in the main facility. First, it should also be noted that the location of the acoustical laboratory has no effect on the recited structure or functionality and therefore does not patentably distinguish the claimed invention over the prior art. Second, the Examiner submits that it is old and well-known in the art of acoustical testing for an acoustical testing company to house its laboratory in a main facility. A company can choose to place their laboratory wherever they see fit, e.g., based on cost considerations and/or convenience. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to adapt the Azonic-Sound Control combination such that the acoustical laboratory is located in a main facility (claim 46) in order to allow Azonic-Sound Control employees to conveniently access the acoustical laboratory, as needed.

Regarding claim 56, neither Azonic nor Sound Control expressly teaches that partner computers, remotely located from the sound control center, transmit updated material and cost information to the sound control center. However, Official Notice is taken that it is old and well-known in the supply chain art for product suppliers/vendors to remotely provide their customers with electronic material and cost updates for supplies. This arrangement helps to inspire confidence among the parties involved and enables the sound control center to provide its customers with as accurate pricing information as possible. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify

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the Azonic-Sound Control combination to incorporate partner computers, remotely located from the sound control center, to transmit updated material and cost information to the sound control center in order to help inspire confidence among the parties involved and enable the sound control center to provide its customers with as accurate pricing information as possible.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-6733. The examiner can normally be reached on Monday-Friday, 10 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Susanna M. Diaz
Primary Examiner
Art Unit 3623

January 8, 2006